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ABSTRACT

This report recommends that an annual report be made to the citizens of Florida about the state of literacy in Florida. The concept of literacy is defined in terms of levels of literacy and basic skills required to achieve the different levels. A review of the literature on literacy is the basis for three suggested levels of literacy: (1) pre-literacy, composed of skills which are still unstable and transient and which allow a person to complete the tasks demanded by society in its elementary schools; (2) basic literacy, composed of stable skills measurable at a grade level of approximately 5.5; and (3) career literacy, composed of occupationally specific skills and functional and survival skills and measurable at a grade level of approximately 7.5. Since work is one of the primary functions of being an independent contributing member of society, career literacy is considered necessary for a person to become minimally literate. The basic skills are those language and computational processes essential for literacy and upon which further learning depends. It is recommended that a statewide criterion assessment device be constructed to identify the essential tasks which need to be accomplished in each skill area. (MKM)

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DETERMINING THE FEASIBILITY OF AN ANNUAL COMMISSIONER'S REPORT OF THE MASTERY OF BASIC SKILLS BY FLORIDA CITIZENS

Basic Literacy and Basic Skills
Technical Report No. 1

DOE-UF Basic Skills Project
DOE Contract No. 750-151

William R. Powell, Campus Coordinator
University of Florida
November, 1975

Department of Education
Tallahassee, Florida
Ralph D. Turlington, Commissioner

CS 002 197

FORWARD

A project effort involves the talents of many individuals, each contributing in some way to the final product. In this effort, Commissioner Ralph D. Turlington and Dr. Bert L. Sharp, Dean of the College of Education, generated the initial thrust.

Dr. K. Fred Daniel and Dr. Charles Reed of the Department of Education continued with their staff and the faculty of the College of Education. With the assistance of Martha Cheek, the initial contract was formulated; selected specialists in the State Department of Education and the College of Education, University of Florida, formed the project team.

Joseph Fitzgerald (reading), Renee Henry (mathematics), Kittie Mae Taylor (language arts), and Crane Walker (measurement), with Ada Puryear as the State Coordinator, made up the project team for the Department of Education.

William R. Powell (reading), Lawrence L. Smith (reading), John Gregory (mathematics), Waldemar Olson (mathematics), and H. Thompson Fillmer (language arts), with William R. Powell as the Campus Coordinator, completed the basic project staff.

In addition, Jeffrey Weathers and Susan Lubet, graduate assistants, worked along with the project staff on the university campus. Charles Broward, media specialist, drew the "flyer report" in its final form.

Several University of Florida faculty members met occasionally in campus seminars on the project topic to discuss and comment on the program thrust and content. They were: William M. Alexander, Elroy J. Bolduc, Donald H. Bernard, Ruthellen Crews, Mary G. Kantowski, Linda L. Lamme, Arthur J. Lewis, Edward C. Turner, Bert L. Sharp, Evelyn L. Wenzel, Emmet L. Williams, and Robert G. Wright.

The many drafts for the final document were carefully prepared and monitored in production by Kathryn K. Weedon. Appreciation is extended to each individual for giving of their time and talent.

William R. Powell

BASIC LITERACY AND BASIC SKILLS: LEVELS AND DEFINITIONS

Literacy is a term which is beginning to take on less concrete meaning as more interest and emphasis is being given to it. Even a casual look at the uses of the term will readily reveal that there is no common meaning for it. It is now fashionable to talk about "basic literacy," "survival literacy," "practical literacy," "functional literacy," etc. And the terms "basic skills" or "the fundamentals" are too often used as if to mean literacy. Of course, such words have a relationship, but they do not mean the same thing. The basic purpose of this document is to give precise definitions to the terms, literacy and basic skills, and to show the natural connection between them.

Dictionary definitions usually indicate that literacy is a condition in which a person can read and write. But many people no longer consider the ability to read and write enough. The knowledge of elementary arithmetic facts and the ability to do simple computing are also expected. A person must show enough competency to be able to communicate and compute with some degree of skill in order to meet the demands of his society. Thus, it is a particular society which defines literacy.

However, the expectations of a given society are normally such that it desires of its members more than just the basics. The objective is to develop each citizen of a society into an independent

person. To be independent, an individual must be able to do the simple language and computational tasks demanded by society without assistance from other persons. The terminal objective of education is to develop self-sustaining, involved persons. The basic communication and computational skills are the cornerstones of literacy, which forms the foundation that gives individuals the means of acquiring the power and freedom to meet the conditions imposed by society. Without literacy, a person cannot be truly free.

What the Literature Says

As stated in the Education Policy for the State of Florida, the basic skills are the communication and computational skills: listening, speaking, reading, writing, and arithmetic (Turlington & Williams, 1975, p. 3). But when one begins a search of the literature for information pertaining to these basic skills, it soon becomes apparent that there is little information of consequence on the topic. When the term "basic skills" is used, it is in relationship to something else.

The literature being reviewed in this document concerns itself with the "basic skills" in relationship to literacy. However, two serious problems will become immediately apparent. First, most of the literature pertaining to literacy is concerned with reading; some of the literature deals with listening and math; while speaking and writing are hardly dealt with at all. Second, although the field has been narrowed to literacy, there are many different definitions of literacy in the literature.

For example, in Linguistic Communication: Perspectives for Research, Miller (1973) has divided literacy into three levels: basic literacy, comprehension, and functional or practical literacy. "Basic literacy means the ability to use correspondences of visual shapes to spoken sounds in order to decode written materials and to translate them into oral language." "Comprehension means ability to understand the meaning of verbal materials." "Functional or practical literacy means ability to read (decode and comprehend) materials needed to perform everyday vocational tasks" (Miller, 1973, p. 3).

While Miller divides literacy into three levels, most definitions of literacy are stated in terms of a person being literate in order to do the real-life tasks necessary to survive in our society. This level of literacy is commonly referred to as functional literacy.

Sticht (1975, p. 4) has defined functional literacy as "possession of those literary skills needed to successfully perform some reading task imposed by an external agent between the reader and a goal the reader wishes to obtain." In other words, one must be able to read something successfully in order to get a job to earn money to eat in order to survive. If a person had the reading skills sufficient to perform his job, he would be considered functionally literate. Functional literacy, according to Sticht's definition, is not based upon a person's skill level, but on the specific task demand or difficulty of the reading task.

Sharon (1973-74) states that a literate person has been generally defined as one who can both read and write simple statements with understanding in his everyday life. During World War II, the U. S. Army coined the term "functional literacy," which meant the capability of understanding written instructions necessary for conducting basic military functions and tasks. The U. S. Army thought a serviceman reading at the fifth-grade level was considered functionally literate; supposedly, a serviceman reading at this level could function effectively in his group (Sharon, 1973-74).

According to Bormuth (1973-74), literacy is the ability to respond competently to real-world tasks. A literate person, then, is one who can get the information he needs from the materials he needs to read. "A person may be regarded as literate or illiterate only with respect to a particular reading task" (p. 15).

With Bormuth's definition of literacy, the term "literate" is specific to the task and to the person. In other words, a person may or may not be literate to a specific reading task. If he can read an application, he is literate; if he cannot, then he is illiterate for that particular task (Bormuth, 1975).

Although Murphy (1975) uses the term "competent" instead of "literate," his definition is in the same framework as Bormuth's. Murphy defines competency as those reading skills suitable for adequate functioning in normal day-to-day life.

The definition developed by the Right to Read Advisory Council in 1973 was a more comprehensive definition than Bormuth's or Murphy's,

but this definition also has some of their same characteristics. According to the Right to Read Advisory Council, "a literate person is one who has acquired the essential knowledge and skills in reading, writing, and computation required for effective functioning in society, and whose attainment in such skills makes it possible for him to develop new aptitudes and to participate actively in the life of his times" (Ahmann, 1975, p. 39).

The UNESCO definition, very similar to that of the Right to Read Advisory Council, states that a person is literate "when he has acquired the essential knowledge and skills which enable him to engage in all those activities in which literacy is required for effective functioning in his group and community, and whose attainments in reading, writing, and arithmetic make it possible for him to continue to use these skills towards his own and the community's development and for participation in the life of his country" (Ahmann, 1975, p. 39).

Another way to define literacy is in relation to the number of completed years in school. UNESCO experts have contended that four years of primary schooling are the minimum requisite for attaining permanent literacy. The Bureau of the Census assesses literacy of the population by tabulating the number of people 14 years of age or over who have not completed six years of school. This is their criterion for functional literacy (Bormuth, 1973-74). Our educational system assumes that, by the fourth grade, children will have acquired basic literacy skills. It appears

that completion of four or six years of schooling is an inadequate criterion for determining functional literacy. Harman (1970) contends that there is no indication that the completion of four grades insures any permanent attainment. Many students completing four grades in school can barely read, and they rapidly regress to total illiteracy. And Miller reminds us that, in the industrialized countries, many opportunities are denied to those who cannot read or write.

Although the previously mentioned definitions of literacy are not complete in themselves, it can be seen that most of these definitions are concerned with having the skills necessary for daily life activities or those necessary to maintain an occupation.

Most of the research completed on literacy deals with adult literacy. For instance, the Harris (1970) study on "survival literacy" was designed to determine the percentage of Americans lacking the reading skills necessary to "survive" in this country. A test for reading and filling out application forms indicated that from 4.3 million to 18.5 million Americans are functionally illiterate.

This study demonstratei that the extent of functional illiteracy in the nation is much greater than had been suspected. The study focused on illiteracy rather than on literacy. Literacy is dealing with what can be read, and is actually read, as opposed to illiteracy, which focuses on the problem of what cannot be read (Sharon, 1973-74).

If functional literacy is regarded in relation to the basic skills needed to maintain one's job, Sticht's research gives some insights. Sticht's (1972) Project REALISTIC had as its primary objective to provide information concerning demands for reading, listening, and arithmetic in several major military occupational specialties. Sticht concluded that different jobs require different reading levels, i.e., a cook needed to read at a seventh grade level, a repairman at an eighth grade level, and a supply clerk at a ninth grade level. For the three occupations, it was necessary to do sixth to seventh grade math and have listening achievement at a seventh grade level.

The mean reading level for the three occupations was approximately eighth grade, to which Miller (1973) agrees. He states "the reading requirements of many occupations are quite modest; probably only a relatively small proportion of jobs require more than current eighth grade reading comprehension" (Miller, 1973, p. 9).

Bormuth (1973-74) discusses a previous research project of his in which he performed a series of regressions between scores on cloze readability tests made from each of several articles and a test that gave grade level scores. He calculated that the grade level score of the average person who answered 35 percent of the items on the cloze test was 10.5. This indicates that the average person is literate with respect to newspaper articles after 10.5 years in school. However, the subjects in this study came from a

high socio-economic urban community.

Sticht (1972) reports that a 1968 report from the Department of Defense indicated that, of a group of 46,000 men who scored below the twentieth percentile on the Armed Forces Qualification Test (AFQT), 43 percent had completed high school; yet 90 percent read at or below the eighth grade level.

Northcutt (1975), in his Adult Performance Level Study, derived three crucial conclusions that appear to be appropriate for the various definitions of functional literacy. Literacy is a term which is meaningful only in a specific cultural context; it is two-dimensional, rather than one-dimensional; and it has meaning which is directly related to success in adult life.

From what is reported in the literature, several conclusions can be drawn. First, literacy means different things to different people. Based on the different definitions available, there are apparently several levels of literacy being discussed, i.e., basic literacy, permanent literacy, and functional literacy. Survival literacy probably is a subset of functional literacy. There is also the implication, though it is not developed, that a hierarchy exists within the concept of literacy. Different researchers have been looking at the top of the problem, or the completion stage, but not the whole process from start to completion. A relationship between the various terms describing literacy is possible and needs to be made explicit.

Another way of looking at the different levels of literacy is

by not confusing the inability to read with functional illiteracy. Persons who can read to some degree may not be able to read well enough to function effectively in their particular occupation, their community, or society and are considered functionally illiterate. It is very likely that the number of functional illiterates is greater than that of nonreaders. The functional illiterate may have achieved what Harman (1970) refers to as permanent literacy, yet he may not have achieved functional literacy.

Second, since there are very likely several levels of literacy, a problem exists as to which levels and what skills the school should have as its concern. It seems logical that those tasks on which everyone should be literate, as opposed to those tasks associated with special occupations and hobbies, are the ones with which schools should be concerned. Only those tasks that are commonly needed by everyone should be included in the definition used with a basic literacy program to be conducted for all. The specialized tasks could then be included in definitions for educational programs designed for those who seek specialized training.

Third, it seems clear from research that educational level or number of years completed in school is not an adequate indicator of reading ability.

Fourth, research studies on the lower levels of literacy are minimal, particularly as they concern writing, speaking, listening, and computation.

Fifth, numbers or percentages involving literacy depend upon a

common reference point or baseline. Indeed, the measurement of the scope of the problem depends upon a stable or static definition. If that reference point is a moving average, then accuracy in estimates of literacy (or illiteracy) will always be relative.

Levels of Literacy

Any definition of basic literacy must be stable, measurable, generalizable, and uni-dimensional. Estimates of magnitude and measurement depend upon it.

If the concept of becoming at least a minimally literate person is the goal of education and life-experiences, then this goal is likely to have general indicator[1] levels which can be used to mark progress toward this end. Viewed in this manner, then, literacy is seen as the universe and the general indicator levels as sub-stages to the principal performance level. Such sub-stages could be designated as the pre-literacy level, the basic literacy level, and the functional (practical) or career literacy level. Such a framework is illustrated in Figure 1.

Put Figure 1 about here

Pre-Literacy Level. Pre-literacy is the first positive substage in the literacy hierarchy. Through formal or informal instruction,

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[1]The term, indicator, is defined here as "a sign of," or as something that "implies the existence of." It is one form of social bookkeeping and can be used for the quantification of the quality of life.

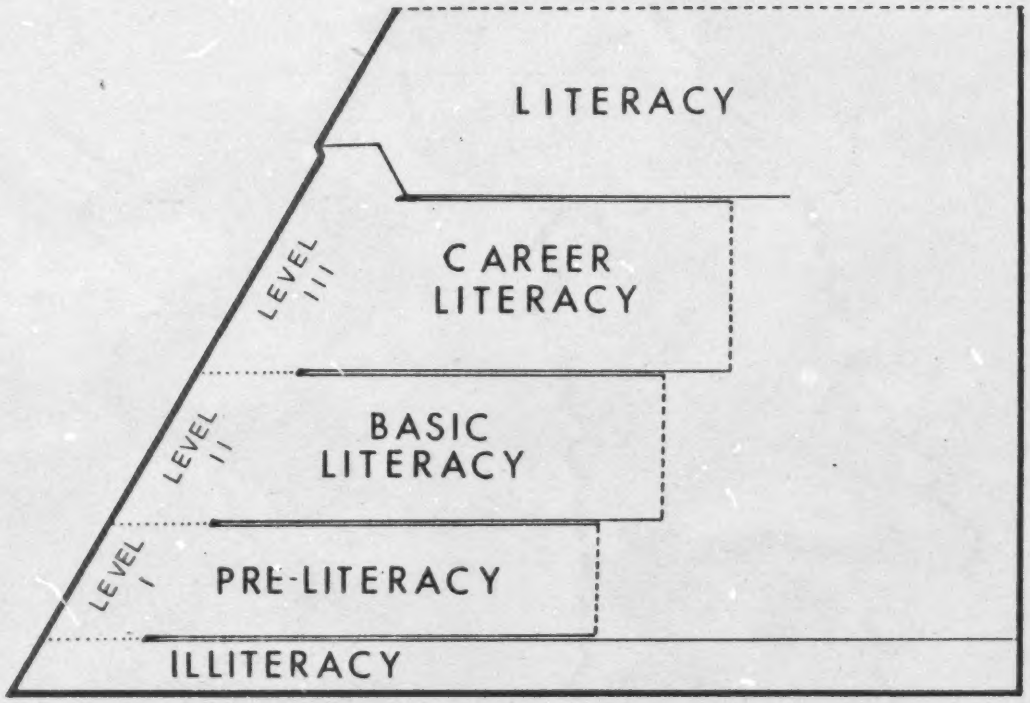

Figure 1. LEVELS OF LITERACY

the individual begins to obtain knowledge of and use of the basic skills in his society. The basic skills are those language and computational processes essential for literacy and upon which further learning depends. The basic skills are the building blocks of the learning structure, and their absence constitutes a major structural flaw which presents a barrier to individual success in a civilized society. The skill areas of listening, speaking, reading, writing, and arithmetic represent the basic areas of communication and computation. The basic skill areas are fundamental to the concept of literacy. Furthermore, acquiring competency in the important areas of general education, and vocational and professional training depends upon acquisition of a level of competency in the basic skills.

The pre-literacy level is concerned with the basic skills which permit a person to successfully complete the tasks demanded by society in its elementary schools. A study by Lee (1933) has shown that in American schools, the demand upon reading ability in the fourth, fifth, and sixth grades is well beyond that which can be realized by reliance upon the primary (grades 1, 2, 3) reading skills. Indeed, Lee found that students who have not equaled the level of reading performance represented by a reading grade score of 4.0 on a typical standardized test would be markedly handicapped in their school work in the intermediate grades. Therefore, it is likely that the pre-literate level is indicated by possession of, and demonstrated performance of, the primary (K-3) basic skills.

Further, even if an individual reaches this indicator level, there is no assurance of permanency of basic skills. The skills

here would not have enough accuracy and automaticity to be of generative value. Certainly the skills would suffer from a regression effect and be rendered useless if not maintained and expanded through additional instruction.

Basic Literacy Level. Whereas the basic skills at the previous level are characteristically unstable and transient, the basic skills at the basic literacy level achieve permanency. They stick and stay stuck. While they may suffer from a regressive effect, they always remain at an operative level, e.g., they can be used upon demand. The basic skills at this level are generative, that is, there is an element of enablement which would permit the basic skills to develop further without formal instruction. They are intact and independent of external support; although the skills still need expansion, specialization, and refinement.

This perspective would suggest that the basic literacy level is that level where the basic skills learned will not regress so that they can no longer be used, i.e., to a level below the threshold of extinction--chance or near chance level. That is to say the basic skills processes have become intact in such a way that the skills are resistant to extinction.

An analogy would be like that of a beginning swimmer. While the beginner might not be very proficient, he can swim or at least did perform the operation of swimming at one point in time. Even if years go by without ever utilizing the skill, the person, if

necessary, can swim (even if not very well).

Such a definition of basic literacy would meet the conditions of stability and uni-dimensionality. Whether it is or can be measured and generalized to all skill areas, only research can determine. Of course, the most obvious problem is the determination of that "elusive" reference point or level indicative of this stage.

Assuming that such a hypothetical level exists does not guarantee that a person can function in culturally specified roles, or even that he can complete forms to the satisfaction of selected observers; but it will probably guarantee that he can read and will always be able to read--at least, minimally.

It would appear that this basic literacy level is where an individual's fluency skills consolidate and become intact, i.e., reach a level of minimal unity. No higher cognitive skills are implied—just simple basic skills resistant to diffusion and extinction.

Now if basic literacy can be viewed as a level resistant to normal extinction processes and it contains those minimal basic skill processes, then it becomes apparent that basic literacy can probably be measured and those skills absolutely essential to its attainment can be determined. Such a procedure is not unlike determining prime factors in mathematics. A search needs to be made for those irreducible skills related to the basic skill processes.

Such a search is not in line with the current popular view in education practice of the extensive expansion of skills into

a catalogue of objectives. Rather, it is the opposite of this position. It is a reductionist position. Search, locate, and identify the least common denominators of the basic skills areas. Ironically, it may be that the expansionist movement will assist and facilitate the reductionist search. It might be possible to utilize those extensive arrays of skills, to distill and crystallize the substance or residue remaining after the superfluity has evaporated.

Such a definition of basic literacy raises questions of the boundaries of accountability for the schools. Can or should the schools be responsible for making everyone operationally competent in every occupational role? Each occupation has its own rules, procedures, and program. It is the school's minimal responsibility to deliver the foundation upon which any occupational training program can build, but it has not been the school's responsibility nor mission to provide specific training for the growing multiplicity of occupational demands (which change over time). It is the unique problem of schooling to deliver the basic literacy upon which any vocational choice can build, extend, refine and specialize.

Career Literacy Level. Having achieved basic literacy, one can be assured of some permanent operational ability; but it does not guarantee that the performance is satisfactory for the demands imposed by a given occupation. It is likely that the career literacy level is not uni-dimensional, but multi-dimensional, as suggested by Northcutt (1975). Stability and generalizability would

not be applicable because the evidence would suggest that the demands of the job are variable from occupation to occupation, and the tasks levels are not generalizable among occupational roles. While the career literacy level most certainly will require a core of skills, there definitely will be specialized requirements for each role; and the level of functioning demanded will vary accordingly. Indeed, there is evidence to suggest this is true (Sticht, 1975). Basic skill acquisition plus advanced skill development are necessary for adequate occupational performance.

Thus, while the basic literacy level is likely to be measurable, generalizable, uni-dimensional and stable, the career literacy level's measurability is occupationally specific, non-generalizable across vocational choices, multi-dimensional, and variable. The demands are set by the work conditions. An adaptation of Sticht's definition of functional literacy fits most appropriately here. He states that functional literacy is "possession of those literacy skills needed to successfully perform" the language and computational tasks "imposed by an external agent between the reader and a goal the reader wishes to obtain" (Italics in the original, 1975, p. 4). He further contends that whether functional literacy is, or is not, considered as functional depends upon the nature of the communicatonn and computational tasks--"whether it is self or externally imposed--and not upon a person's skill level" (Italics in the original, 1975, p. 5).

In other words, functional literacy is whether or not the reader is in possession of the necessary skill level which matches the factors inherent in the readability level of the work material.

Such a position also is applicable to the recent concept of "survival literacy," as coined by Harris (1970). The forms used by Harris in his study (social security, personal bank loan, public assistance, Medicaid, and a driver's license) are subject to varying difficulty, which was not identified, and to novelty changes in format. What Harris is most likely describing is a sub-category of career literacy--that which deals with a sample of society's life-sustaining forms. If a readability measure were to be applied to the forms used during this interview study, they most assuredly would have a difficulty level that exceeds the definitional requirements of basic literacy.

The pre-literacy level is the foundation for the basic literacy level, which in turn is the foundation for the career literacy level. Since work is one of the primary functions of being an independent, contributing member of society, career literacy is necessary to become a minimally literate person in American society.

In relation to the levels of literacy discussed above, the basic skills are subsumed under each literacy level. That is, the basic skill of reading constitutes a major element under pre-literacy, basic literacy, and functional literacy. The only difference between the basic skill of reading under pre-literacy

and the basic skill of reading under basic literacy is the level of achievement (and thus degree of utility provided by this level of achievement). This is the case for the other basic skills as well.

However, unless it is assumed that all persons agree as to what constitutes a particular level of achievement for each basic skill within a given literacy level, efforts to have students acquire the competencies of a particular level are unguided. One of the current problems in education today is the blind assumption that all persons agree as to what elements of knowledge constitute these levels of achievement for the basic skills. For the most part, levels of achievement presented for public consumption are communicated in terms of normalized test results.

To speak of skills gives the impression of specific, self-contained tasks or abilities. However, skill performance can be considered two ways: as a task and as a level of performance. As a task, skilled performance is concerned with what is done; how well that specific task is performed has reference to a level of accomplishment. In current usage, the meaning of skill performance tends to have the latter meaning--not the specific units of a reading performance. The relationship between these two concepts of skill performance can be viewed in the two-dimensional framework of Figure 2.

Put Figure 2 about here

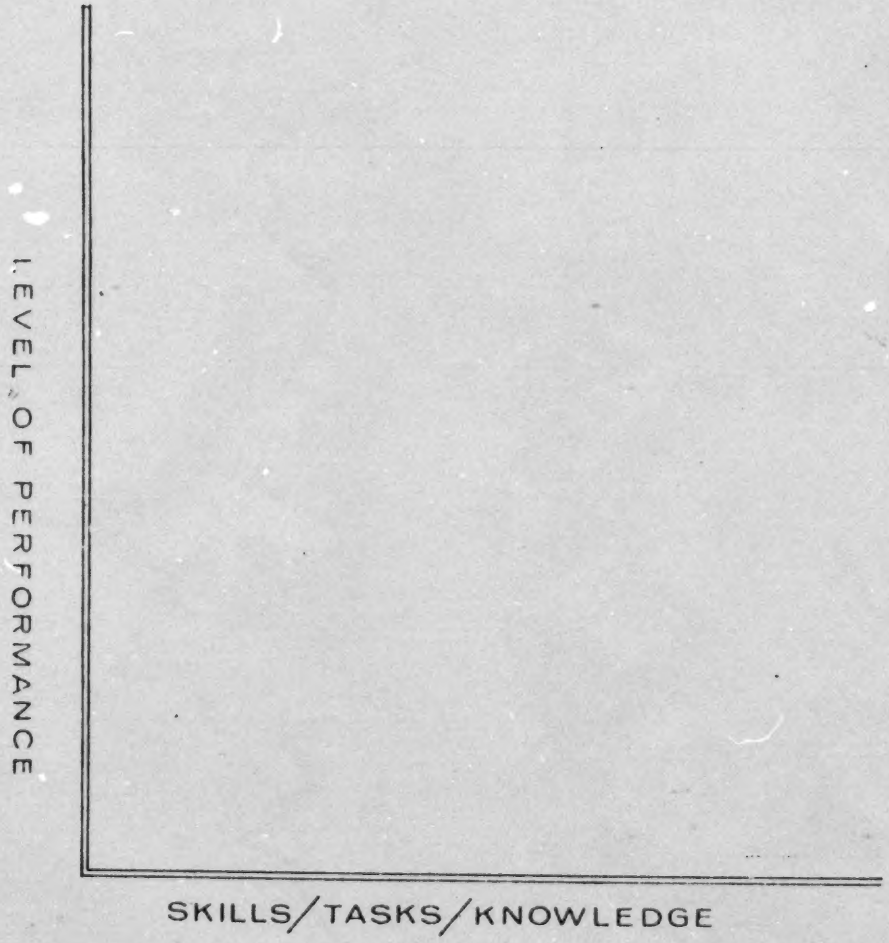

Figure 2. SKILLED PERFORMANCE

Fitts and Posner (1967) concluded from their comprehensive review of the psychological research on skills that their development always involves three phases: (1) the cognitive phase, in which the learner comes to understand the nature of the task and develop concepts of its component parts; (2) the association of specific responses with appropriate stimuli; and (3) making the performance of the skill automatic. Typically, phase 2 receives the most attention from basic skill teachers. Phases 1 and 3 are often neglected. Neglect of phase 3 leads to the phenomenon which Downing (1973) terms "ex-literacy," that is, loss of the ability to function by individuals who have ceased to practice the skill and who have never overlearned the skill. Neglect of phase 1 causes the learner to enter phase 2 unready to handle the concepts and technical terms needed to talk and think about the written and spoken forms of language and the relations between them.

Basic Skills

A search of the literature for a definition of basic skills is not very fruitful. Basic skills seems to be a general term for which it is assumed that everyone has the same meaning. The general conception is that the basic skills refer to the 3 R's, that is, reading, writing, and arithmetic. However, these are composite skill areas and do not give an indication of specificity in that given skill activity. In this sense, the term, basic skill, has more reference to level than to specific tasks in communication and computation.

In order to define basic skills, it must first be determined

to what the skills are basic. The question, "If 'X' is a basic skill, then to what is it basic?" must be answered. To be "basic," simply means to be a foundation or a starting point. It is the minimal, yet essential, part of an item or process supporting the rest. To indicate an operation as basic is to say it is that range of values, e.g., point, line, etc., which provides the substantial supporting elements on which an entire superstructure is built.

Since skilled performance can be thought of along two dimensions, the same is true for basic skills (which is a form of skilled behavior). If basic skills are perceived as a collective skill area of communication and computational tasks, then the following definition answers the question stated above.

> "Skills X_1, X_2, ... are basic skills if their achievement contributes substantially to the level of performance and the learning of tasks in a large number of other subject areas."

Basic skills involve those organized patterns of activities learned in school which are essential for the carrying on of other school activities, with particular reference to the primary processes of reading, other language activities, and arithmetic. The term further implies a level of performance in these activities which is not likely to disintegrate under moderately distracting, disturbing, or difficult situations. The basic skills are not only directed at some criterion of performance, but are capable

of adjusting to change. They must also possess a degree of knowledge(s) and task abilities in a given subject area.

Therefore, basic skills are those subject areas which contribute substantially to the level of performance and the learning of tasks as a precondition for further learning in other subject areas. If the basic skills can be designated as to both level of performance and organization of activities, then the study of a given skill area is an attempt to understand the system of that organization at a given level.

Basic Skills and Literacy

Basic skills have been presented as skilled performances involving the two dimensions of level and tasks. Literacy has been indicated to have three levels: pre-literacy, basic literacy, and career literacy. There is an internal relationship between the two concepts. This connection can be accomplished by combining the ideas of Figure 1 with those of Figure 2, presented previously. This new relationship is presented in Figure 3.

Put Figure 3 about here

Levels for Literacy

The literature previously discussed and clinical observations would seem to permit the determination of estimated measured levels of performance for each literacy.level. Figure 4 estimates where

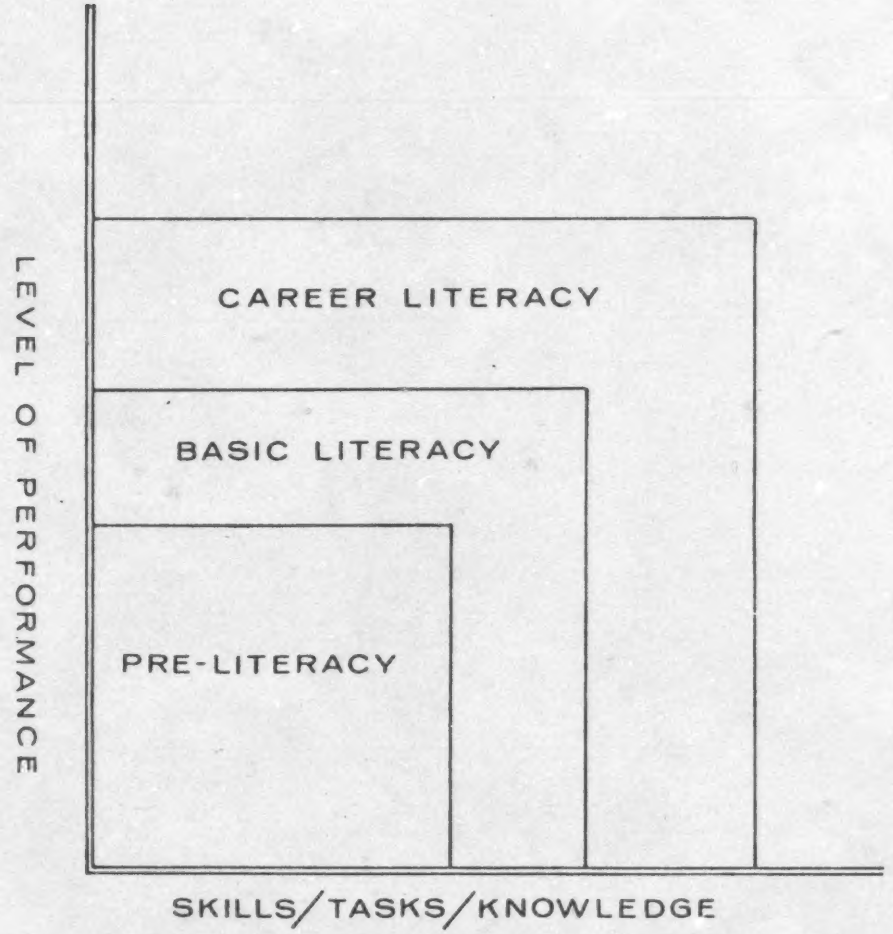

Figure 3. BASIC SKILLS AND BASIC LITERACY

those relationships occur using a reliable standardized measure for each of the basic skill areas.

Put Figure 4 about here

Pre-literacy will be accomplished at an estimated grade level performance of about 4.0 (± .5). Given this level, a person should be able to minimally do other tasks demanded of him in grades four, five, and six. However, the skills at this level, if they are developed no further, are subject to regression and "rust away from disuse" (Burnett, 1965, p. 14).

The basic literacy level ensures permanency of use. It should become evident at an estimated grade level of about 5.5 (± .5). (Note of caution: For the arithmetic area, this point may not be applicable.) Even though such a performance level will not permit the individual to engage in an extensive number of real-life activities involving print, he can and always will be able to read, write, and do arithmetic--perhaps not at the level demanded by many observers and written tasks--but when this point is reached, he will not "relapse...into illiteracy" (Balpuri, 1958, pp. 171-173).

With measured achievement of about 7.5 (± .5), an individual will be entering into the career literacy level. This level, as mentioned earlier, is variable, non-generalizable, and multi-dimensional, depending upon the demands imposed by the career tasks.

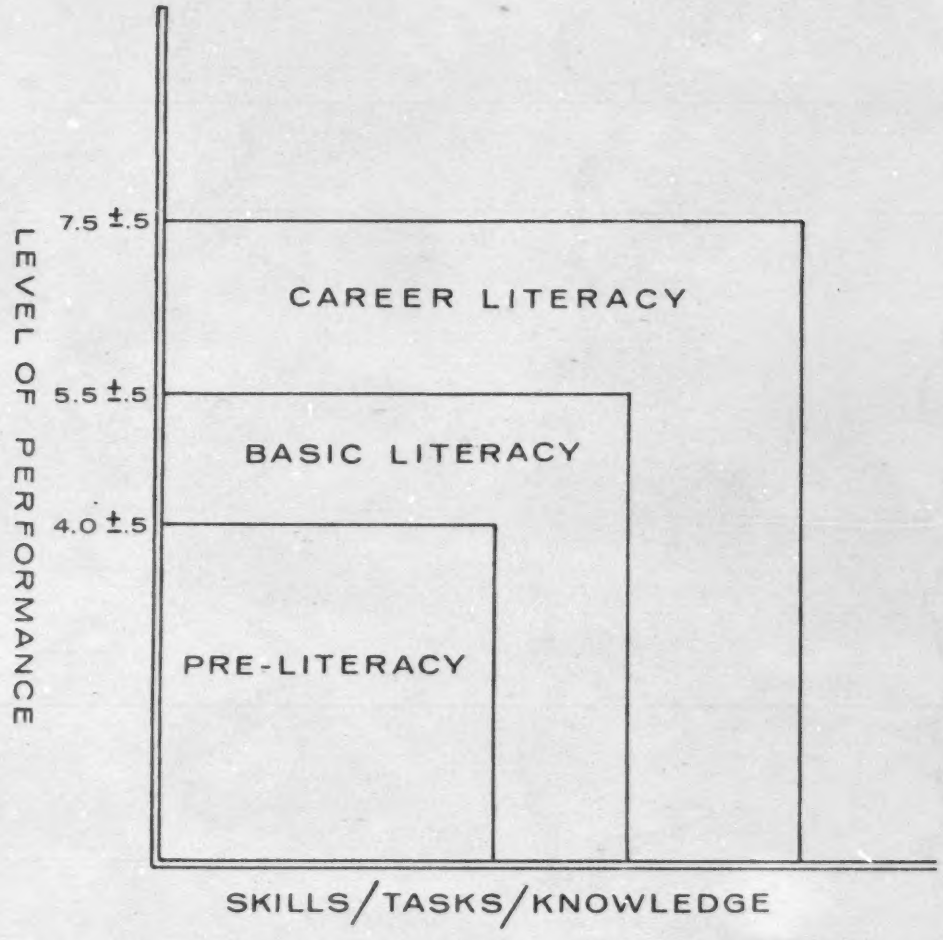

Figure 4. LEVELS OF LITERACY PERFORMANCE

However, progress to this level will permit minimal work choice and the ability to meet the demands of most "survival tasks."

Assessment Data in the State of Florida

Presently, there are at least five types of assessment data available in the State of Florida. Three of these have statewide comparability: the 1974-75 State's Assessment results at grade levels three, six, and nine; the Florida Eighth Grade Testing Program; and the 12th Grade Placement Test. The other two types of data are either a sampling, such as the National Assessment results of 1972, or the standardized achievement test data available in each district. For the determination of the levels as conceived in this document, each of the five types as data has some limitations, and these will be discussed below.

The National Assessment Program data only deal with a small sample of youngsters in the state, from a limited number of school districts. Such data is not likely to represent the picture of the state as a whole. Furthermore, the National Assessment data are criterion tests and do not produce a grade equivalent. However, the data would produce information on achievement of specific tasks, not general performance levels, in reading, writing, and arithmetic at approximately grades four, seven, 10, and selected adult population.

The State Assessment data are also criterion items, and the limitations of no grade equivalents mentioned above apply here, also. But these data are more task specific, comprehensive, and available for grades three, six, and nine.

Since both the national and state assessment items are criterion-based, a word about the use of such results for the concept here seems appropriate. Criterion tests are specific to a skill area, which makes them useful for determining mastery of skills, tasks, and knowledge. If the criterion tests were not so short in length, they could provide useful interpretation of needed and essential knowledge(s) and tasks for skills within a subject area. They were not designed to give an indication of a grade level of performance; therefore, they could not be used for determining levels of literacy.

The Florida Eighth Grade Testing Program results are the only directly relatable data to the levels of literacy concept as presented here. They give a grade level equivalence score, interpretable on both state and national norms. Therefore, they could conceivably provide reasonably reliable data for determining evidence of the attainment of the career literacy level.

The 12th Grade Placement results, while statewide in scope, would not be applicable for the purpose here.

District data from standardized achievement tests could be a rich source of information for determining levels of literacy. However, some districts do not give them; some give one type of test, another district a different instrument, so the data is not comparable. Further, the time of testing may not be the same, which reduces comparability even if the same tests were used.

All in all, the present stock of data will neither reveal

reliable information for levels of literacy, nor the tasks and specific skills in a given subject area. Insights for observation and hypothesis-building are possible from the present data; but to fit the model as presented here, some changes would have to be made.

Recommendations

The suggestions below are based on the two concepts as presented in this document: levels and skills.

1. For the determination of levels of literacy, a statewide every-pupil testing or a random representative sample testing on a selected standardized instrument should be considered. These measures should come at the beginning and end of the academic year in the areas of reading, language, and arithmetic. A recommended schedule of assessment is shown in Table 1.

Put Table 1 about here

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2. For the determination of the minimal basic skills, the identification of the essential tasks in each skill area needs to be accomplished. Then these items will need to be incorporated into a criterion assessment device to be administered to a representative random sample on a statewide formula. This information could then be related to the data collected for level determination (above), which should indicate the relationship between tasks and levels. Program prescriptions then could be formulated for both school

TABLE 1. SCHEDULE OF ASSESSMENT FOR INDICATORS OF COMPETENCY

Type / Grade Level	PERFORMANCE INDICATORS		SOCIAL INDICATORS
	Norm Referenced Measures	Criterion Referenced Measures	
2 [1]		X	
3 [2]	X		X
4 [1]		X	
5 [2]	X		X
6 [1]		X	
7 [2]	X		X
8 [1]		X	
11 [2]	X		
12 [1]		X	X
Adult	X	X.	X

X [1] - Testing at the beginning of academic year

X [2] - Testing at the end of academic year

curriculum programs and competencies for teacher education. The data, as assessed via the schedule in Table 1, should provide implications for program prescription, instructional prescriptions, and teacher education.

3. A simplified report to the citizens of Florida should be prepared and distributed. A one-page six-panel "flyer" or brochure, such as is illustrated in Appendix A, might serve well for wide distribution to the people.

This "mock-up" example is a simulated possibility. However, the information in this model is based only on the data taken from the 1975 report on the Florida Eighth-Grade Testing Program. At best, this data would indicate the status of performance for reading and mathematics at approximately the Career Literacy Level. There were not data available to give an estimated picture of the Pre-literacy or the Basic Literacy Levels. Such data need to be generated as suggested above in recommendation two.

If such a mail-out or brochure approach is used for dissemination, it should contain information concerning performance in each basic skill area for each literacy level. Perhaps an insert, page, or panel for each literacy level would need to be developed.

In any instance, if the Commissioner's report of data on the mastery of basic skills is to be a direct report to the people, the format should be attractive, eye-catching, contain a simplified structure, and provide accurate information stated in a non-technical, positive manner for each literacy level. Such a procedure

would be inexpensive, and the product is likely to be one that will be read and understood by the citizens of the state.

REFERENCES

Ahmann, J. Stanley. An Exploration of Survival Levels of Achievement by Means of Assessment Techniques, in D. M. Neilsen and H. F. Hjelm (Eds.), Reading and Career Education. Newark, Delaware: International Reading Association, 1975, pp. 38-42.

Balpuri, Surenda. Whither Adult Education in India? Fundamental and Adult Education, 10 (1958), pp. 171-173, as quoted in John Downing, Comparative Reading. New York: The Macmillan Company, 1973, p. 170.

Bormuth, J. R. Reading Literacy: Its Definitions and Assessment, Reading Research Quarterly, 1973-74, 9, pp. 7-66.

Bormuth, J. R. Literacy in the Classroom, in Page, William D. (Ed.), Help for the Reading Teacher: New Directions for Research.

Burnett, Mary. ABC of Literacy, Paris: UNESCO, 1965, p. 14.

Downing, John. Comparative Reading. New York: The Macmillan Company, 1973.

Fitts, Paul M. and Posner, Michael I. Human Performance. Belmont, California: Brooks/Cole Publishing Co., 1967, pp. 11-15.

Harman, D. Illiteracy: An Overview. Harvard Educational Review, May, 1970, 2, pp. 226-243.

Harris, L. and Associates. Survival Literacy Study, Washington, D.C.: National Reading Council, September, 1970, (ED 068 813).

Lee, D. M. The Importance of Reading for Achieving in Grades Four, Five, and Six. New York: Bureau of Publications, Teachers College, Columbia University, 1933.

Lewis, Arthur J. Indicators Relating to Student Achievement and the Level of Competence of Florida Citizenry. Tallahassee: Board of Regents Grant RS-175, 1976.

Miller, G. A. (Ed.). Linguistic Communication: Perspectives for Research. Newark, Delaware: International Reading Association, 1973.

Mushkin, S. National Assessment and Social Indicators. Washington, D.C.: U.S. Government Printing Office, 1973, (ED 082 290).

Murphy, R. T. Assessment of Adult Reading Competence, in D. M. Neilsen and H. F. Hjelm (Eds.), Reading and Career Education. Newark, Delaware: International Reading Association, 1975, pp. 50-61.

Northcutt, N. W. Functional Literacy for Adults, in D. M. Neilsen and H. F. Hjelm (Eds.), Reading and Career Education. Newark, Delaware: International Reading Association, 1975, pp. 43-49.

Sharon, A. T. What Do Adults Read? Reading Research Quarterly, 1973-74, 9, pp. 148-169.

Sticht, T. G. (Ed.). Reading for Working. Alexandria, Virginia: Human Resources Research Organization, 1975.

Sticht, T. G., Caylor, J. S., Kern, R. P., and Fox, L. C. Project REALISTIC: Determination of Adult Functional Literacy Skill Level. Reading Research Quarterly, 1972, 7, pp. 424-465.

Turlington, Ralph D. and Williams, James H. "Education Policy for the State of Florida." The Education Element of the State Comprehensive Plan, Phase 1. Tallahassee, Florida: Department of Education, March, 1975.

APPENDIX A

THE WAY IT IS!

- FLORIDA STUDENTS ARE ON THE AVERAGE 17% BELOW THE NATIONAL NORM FOR CAREER LITERACY.

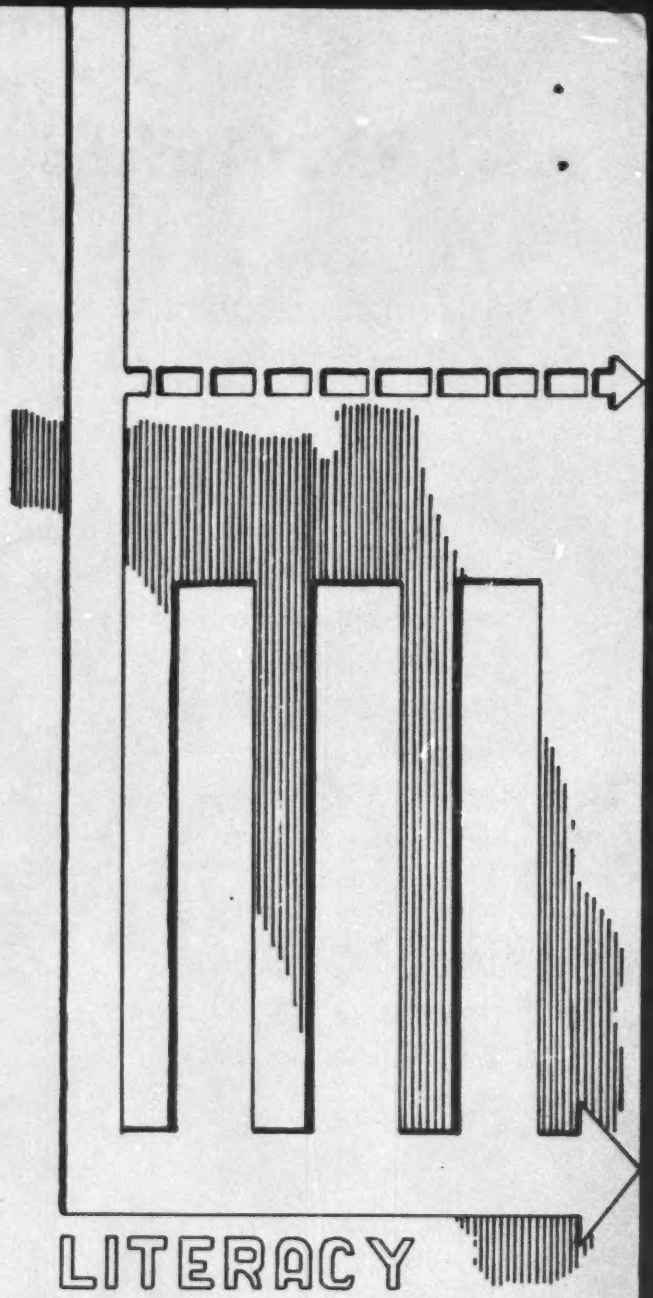
- ONLY 1/3 OF EIGHTH GRADE STUDENTS IN FLORIDA WOULD SCORE ON OR ABOVE THE NATIONAL AVERAGE IN READING VOCABULARY AND ARITHMETIC COMPUTATION.

- CUBAN SCHOOL CHILDREN SCORE SIGNIFICANTLY BELOW WHITE CHILDREN IN FLORIDA SCHOOLS. BLACK YOUNGSTERS SCORE SIGNIFICANTLY BELOW BOTH CUBAN AND WHITE CHILDREN.

RALPH D. TURLINGTON
COMMISSIONER
DEPARTMENT OF EDUCATION
TALLAHASSEE, FL. 32304

ADDRESSING LABEL

MAILING PERMIT



LITERACY in FLORIDA

LITERACY LEVELS:

PRE-LITERACY-

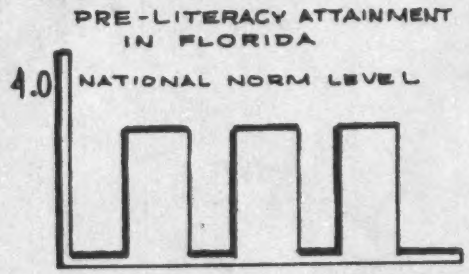
PERFORMANCE AT ABOUT 4.0 GRADE LEVEL

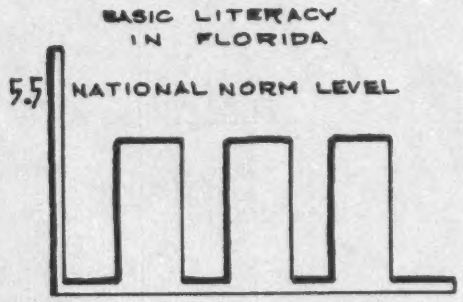
BASIC LITERACY-

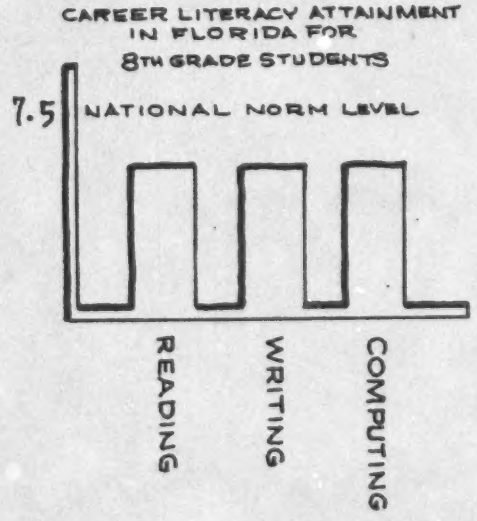
PERFORMANCE AT ABOUT 5.5 GRADE LEVEL- PERMANANCY LEVEL, THE LEVEL NOT SUBJECT TO EXTINCTION

CAREER LITERACY-

PERFORMANCE AT ABOUT 7.5 GRADE LEVEL- THE FUNCTIONAL LEVEL







-THE BASIC SKILLS

READING, LISTENING, SPEAKING, WRITING, AND COMPUTATION- THOSE SUBJECT AREAS WHICH CONTRIBUTE SUBSTANTIALLY TO THE LEVEL OF PERFORMANCE AND THE LEARNING OF TASKS IN A LARGE NUMBER OF OTHER SUBJECT AREAS.

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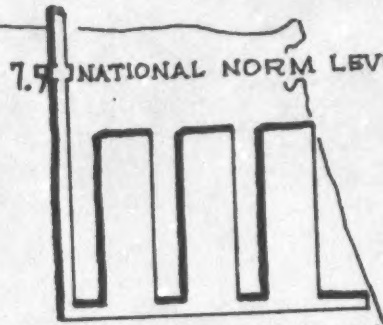
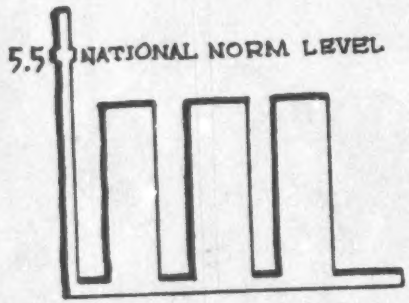
CAREER LITERACY - PERFORMANCE AT ABOUT 7.5 GRADE LEVEL - THE FUNCTIONAL LEVEL.



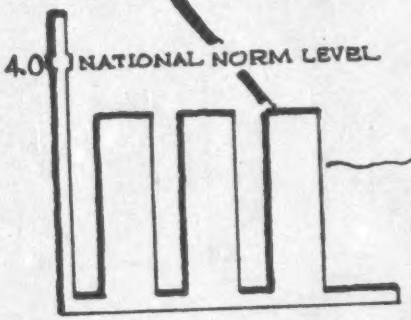
CAREER LITERACY ATTAINMENT IN FLORIDA FOR 8TH GRADE STUDENTS



BASIC LITERACY IN FLORIDA

BASIC LITERACY - PERFORMANCE AT ABOUT 5.5 GRADE LEVEL - PERMANANCY LEVEL, THE LEVEL NOT SUBJECT TO EXTINCTION.

PRE-LITERACY - PERFORMANCE AT ABOUT 4.0 GRADE LEVEL.



PRE-LITERACY ATTAINMENT IN FLORIDA